(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

PCT

(43) International Publication Date
2 February 2006 (02.02.2006)

(10) International Publication Number
WO 2006/011708 A1

(51) **International Patent Classification**[7]: B01J 19/08, C02F 1/48, H01F 7/02

(21) **International Application Number:** PCT/KR2005/001290

(22) **International Filing Date:** 3 May 2005 (03.05.2005)

(25) **Filing Language:** English

(26) **Publication Language:** English

(30) **Priority Data:**
10-2004-0060491 30 July 2004 (30.07.2004) KR

(71) **Applicants and**
(72) **Inventors:** **JUNG, Tae Young** [KR/KR]; 207-1501, Shinchang Hill Apt., Minsok-maul, #558, Bora-ri, Giheung-eup, Yongin-shi, Gyonggi-do 449-955 (KR). **JUNG, Seung Yong** [KR/KR]; 102-404 Shinmiju Apt., #201-2, Byungjom-ri, Taean-eup, Hwasung-shi, Gyonggi-do 445_9"74 (KR).

(74) **Agent:** **JO, Eui Je;** TOP PATENT & LAW FIRM, RM. 1405, Hye Chun Bldg., #831, Yuksam-dong, Gangnam-gu, Seoul 135-080 (KR).

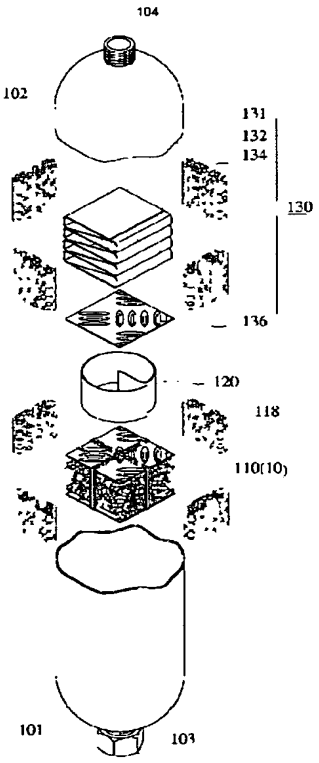
(81) **Designated States** *(unless otherwise indicated, for every kind of national protection available):* AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

(84) **Designated States** *(unless otherwise indicated, for every kind of regional protection available):* ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

[Continued on next page]

(54) **Title:** IONIZATION DEVICE USING MAGNETIC FORCE AND FAR INFRARED



(57) **Abstract:** An ionization device using magnetic force and far infrared is provided, which amplifies the magnetic flux density of a magnet and activates the far infrared. The ionization device comprises a casing (11) in which a containing space is formed; a magnetic material (13), on the center of which magnets (13a) of a certain gauss are attached to distribute a magnetic force; a magnetic flux density control plate (14) composed of a diamagnetic material for covering upper and lower portions of the magnetic material (13) so as to distribute a magnetic flux density of the magnets (13a) through the magnetic material (13); lateral, upper and lower magnetic amplification members (15, 15a) which are tightly winded with a plurality copper wires, for amplifying and inducing the magnetic flux of the magnetic flux density control plate (14) laterally, upward and downward, in which a fluid flux space (A) is formed; far infrared emission members (16), in corporated in the fluid flux space (A) so that the far infrared is induced together with the amplified magnetic flux density in the magnetic flux within the fluid flux space (A) of the magnetic amplification member (15); inductive conduction pieces (17), incorporated in the fluid flux space (A) so that lines of magnetic force in the magnetic flux within the space (A) of the magnetic amplification member (15) are induced and re-amplified; and a lid (12) for covering the magnetic material (13), magnetic flux density control plate (14), magnetic amplification member (15), far infrared emission members (16) and inductive conduction pieces (17).

WO 2006/011708 A1

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.